

Amendments to the Claims:

Please review and consider the arguments below.

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1. (Currently amended) Apparatus for creating a cavity in a bone, said cavity (I) having a cross section which has a generally triangular profile having a first side generally parallel with an axis of the bone and a second side forming an acute angle with the first side, and (ii) being contiguous with a pre-existing conical cavity in the bone, said apparatus comprising:

a drive shaft having an axis, a proximal end configured for coupling to a drive means and a distal end configured to form a portion of a drive joint for coupling the drive shaft to a cutter;

a frame for carrying a cutter, the frame including a frame shaft having a longitudinal axis and a cutter mount for mounting a cutter at a first angle approximating the acute angle with respect to the frame shaft, the mount including a bearing bracket extending laterally from the frame shaft to a bearing configured to receive a portion of a cutter and maintain the received cutter oriented at the first angle during rotation;

a cutter for cutting said cavity, the cutter having a head configured to form a portion of a drive joint for coupling the cutter to a drive shaft; and,

wherein the drive shaft is coupled to the cutter to form the drive joint, the cutter is received in the mount at the first angle and the axis of the drive shaft forms a second angle with the longitudinal axis, the second angle being less than the first angle.

Claim 2. (Currently amended) The device of claim 1 wherein the axis of the drive shaft is substantially parallel to the longitudinal axis of the frame shaft.

Claim 3. (Original) The device of claim 2 and further comprising a sleeve disposed about portions of the drive shaft adjacent the cutter.

Claim 4. (Original) The device of claim 3 and further comprising a drive shaft bracket coupled to the frame and configured to receive the drive shaft therein and maintain the orientation of the axis of the drive shaft with respect to the longitudinal axis of the frame.

Claim 5. (Original) The device of claim 3 wherein the drive shaft and sleeve are mounted to the frame to move relative thereto to facilitate loading and removal of a cutter.

Claim 6. (Currently amended) The device of claim 3 and further comprising a plate mounted substantially perpendicular to the longitudinal axis of the frame shaft and configured to transfer forces applied to the plate to the frame.

Claim 7. (Original) The device of claim 4 and further comprising a miller shell for registering the apparatus with the pre-existing conical cavity, the miller shell having a longitudinal axis, an external surface a portion of which engages the wall of the pre-existing conical cavity, and a shell configured to receive the frame and allowing the frame to move along the longitudinal axis.

Claim 8. (Original) The device of claim 7 and further comprising indicators for indicating the longitudinal location of the miller frame relative to the miller shell.

Claim 9. (Original) The apparatus of claim 3 wherein the cutter comprises a cutting surface having an outer diameter and a bearing surface at one end of the cutting surface having an outer diameter larger than the outer diameter of the cutting surface and wherein the bearing for receiving the cutter comprises a bearing surface for mating with said bearing surface of the cutter.

Claim 10. (Currently amended) Apparatus for creating a cavity in a bone for receiving a prosthesis which has a conical portion and a projection of a generally triangular profile, said apparatus comprising:

a shell comprising a conical portion which defines a longitudinal axis and a frame shaft receiving cavity for receiving a frame;

a frame having a frame shaft, a drive shaft and a shield, the frame shaft being received by the shaft-receiving cavity and being movable with respect to the shell along

the longitudinal axis, said frame configured to carry a cutter disposed at an acute angle relative to the longitudinal axis, the drive shaft being disposed at an drive shaft angle relative to the longitudinal axis less than the acute angle and the drive shaft being configured at one end to couple to and drive the cutter, and the shield being disposed about portions of the drive shaft adjacent the one end; and

a cutter for cutting a cavity having a generally triangular profile, said cutter being carried by said frame and being configured to mate with and be driven by the drive shaft.

Claim 11. (Original) The apparatus of claim 10 wherein the cutter and the frame include mating bearing surfaces.

Claim 12. (Currently amended) The apparatus of claim 11 wherein the frame includes a drive shaft bracket for maintaining the orientation of the drive shaft relative to the frame shaft.

Claim 13. (Currently amended) The apparatus of claim 12 wherein the drive shaft is maintained in an orientation substantially parallel to the frame shaft.

Claim 14. (Original) The apparatus of claim 10 wherein the cutter and the drive shaft are configured to cooperate to form a pinned-sleeve shaft coupling.

Claim 15. (Original) The apparatus of claim 14 wherein the drive shaft includes a slotted end forming forks.

Claim 16-18. (Cancelled).

Claim 19. (New) Apparatus for creating a cavity in a bone, said cavity (I) having a cross section which has a generally triangular profile having a first side generally parallel with an axis of the bone and a second side forming an acute angle with the first side, and (ii) being contiguous with a pre-existing conical cavity in the bone, said apparatus comprising:

a drive shaft having an axis, a proximal end configured for coupling to a drive means and a distal end configured to form a portion of a universal coupling for coupling the drive shaft to a cutter;

a frame for carrying a cutter, the frame including a frame shaft having a longitudinal axis and a cutter mount for mounting a cutter at a first angle approximating the acute angle with respect to the frame shaft, the mount including a bearing bracket extending laterally from the frame shaft to a bearing configured to receive a portion of a cutter and maintain the received cutter oriented at the first angle during rotation;

a cutter for cutting said cavity, the cutter having a head configured to form a portion of the universal coupling for coupling the cutter to a drive shaft; and,

wherein the drive shaft is coupled to the cutter to form the universal coupling, the cutter is received in the mount at the first angle and the axis of the drive shaft forms a second angle with the longitudinal axis, the second angle being less than the first angle.

Claim 20. (original) The device of claim 19 wherein the axis of the drive shaft is substantially parallel to the longitudinal axis of the frame shaft.

Claim 21. (original) The device of claim 20 and further comprising a sleeve disposed about portions of the drive shaft adjacent the cutter.

Claim 22. (original) The device of claim 21 and further comprising a drive shaft bracket coupled to the frame and configured to receive the drive shaft therein and maintain the orientation of the axis of the drive shaft with respect to the longitudinal axis of the frame.

Claim 23. (original) The device of claim 22 wherein the drive shaft and sleeve are mounted to the frame to move relative thereto to facilitate loading and removal of a cutter.